

ON THE LIFE-HISTORIES OF AUSTRALIAN
COLEOPTERA.

PART I.

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This paper is a brief record of observations made during the last season (1892) upon the larvæ, habits, and food plants of a number of Coleoptera, most of which are common in the vicinity of Sydney. I am not aware that anyone has worked at Australian beetles in regard to their larvæ and transformations in a systematic manner; the only paper on the subject I have seen is one by Mr. D. Best, of Melbourne, in which he describes forty-six Australian longicorns (but he only gives the food plants of a few and no descriptions of the larvæ), published in the Southern Science Record, Victoria, 1880-1, in five parts.

All the following species have been carefully bred from sections of infested stems cut from the trees, or from larvæ kept in damp earth.

I believe some interesting information in respect of the affinity of certain genera can be obtained by studying the larvæ of our longicorn beetles; and with a little experience it is not difficult to tell the genera to which some of the larvæ belong, as many of them have very distinctive characters.

The Acacias are attacked by a great number of fine longicorns, many of which do a great deal of damage to the young trees, while others do not appear to be partial to them until they are old and decaying; others again only infest dead limbs or dying trees. As in other orders of insects, the beetle larvæ are very much subject to the attacks of parasitic Hymenoptera, chiefly belonging to the family *Braconide*.

The genus *Phoracantha* comprises a number of large and handsome beetles which almost entirely confine their attacks to the Eucalypts, feeding upon the dead wood; several species are often found when cutting up blocks of firewood sold in Sydney, in which the larvæ must live for a considerable time.

I am indebted to the Rev. Thos. Blackburn for the identification of a number of the beetles described, to Mr. C. French for notes with regard to the habits of identical species in Victoria, and to Mr. R. T. Baker for naming the food plants of some of them.

MACROTOMA SERVILIS, Pascoe, Journ. of Ent. ii. 1863, p. 49.

Larva white, three inches long, slender, cylindrical, with broadish head; mouth parts ferruginous, jaws black, broad, forehead with slight furrow down centre, with shorter one on either side, the whole rugose; thoracic segments narrow, with fine crossed lines on the summit; legs small, ferruginous; first seven abdominal segments with an elongate square in centre of upper side, decreasing in length and increasing in width towards the extremity; eighth segment smooth, cylindrical, narrow, the last longest, smooth, shining, rounded at anus; on the under side the last two thoracic and first seven abdominal segments with somewhat similar but more elongate markings.

The larva feeds upon the stems of the large Banksias (*Banksia integrifolia*), common along the New South Wales coast, mining large cavities out of both living and dead trees; the chambers are large but irregular in form, the grub when full grown forming a large oval chamber in which it undergoes its transformation.

Though an immense number of the Banksias about Sydney are riddled with the holes of these larvæ, yet the beetle is rarely found, as it generally hides in the crevices of the rough bark of the trunk. The larvæ from which my specimens were bred were taken in a section of a dead tree cut off on the "Nine Mile Beach," at Gerringong in August, the beetles coming out in December. The beetle is a reddish-chocolate-brown, the face rugose, furrowed between the eyes, and with a coat of short reddish hair below the junction with thorax; the thorax is

covered with irregular confluent punctures, with irregular spines along the outer edges ; the elytra faintly furrowed with two shallow lines on the sides, and all covered with fine wavy lines which give it a rugose appearance, smaller and finer towards the apex ; femora and tibia armed with stout spines.

PHORACANTHA TRICUSPIS, Newman, Entomologist, 1841, p. 3.

Larva white, stout, with a broad head, small legs, segments regular, rounded at the anus ; mouth parts and jaws black, projecting ; head large, rounded, and arched over the jaws, square at apex, forehead with furrow in centre, rugose at apex, sloping down, hollow and smooth in middle and rugose below above mouth ; thoracic segments narrow, with an angular depression in the centre of each ; abdominal ones regular, first four narrow, fifth, sixth, and seventh rounder and broader, all with an impressed elongate square in the centre, eighth segment very narrow, smooth and shiny, anal segment large, smooth, shining, rounded at apex.

The larvæ attack the dead or dying timber of several of the Eucalypts, and after feeding under the bark in the earlier stages penetrate into the centre of the tree, gnawing out large flat chambers several inches in diameter ; in these they remain for several years.

The beetle is one of the largest of the genus, and is generally found hiding under loose bark on the stems of large trees.

URACANTHUS TRIANGULARIS, Hope, Trans. Zool. Soc. i. p. 108, t. 15, f. 4.

Larva bright canary yellow, long and slender, segments rounded, broad, and deeply constricted, lightly covered with reddish hairs, thickest on head and anal segment ; mouth parts ferruginous, jaws black, stout, and truncate ; head rounded in front, widest behind, darkest at base, smooth in centre, forehead creamy-white, with fine parallel striations ; legs ferruginous, very small ; thoracic and abdominal segments deeply impressed by a parallel line which divides each segment into two rounded warty lumps on the upper side, on the under side smooth, with slight corresponding marks

on each segment; anal and segment preceding it smooth and cylindrical, covered with reddish hairs, the tip of the anal one ornamented with five stout spines, the first large, followed by two pairs of smaller ones.

The larva attacks the stems of *Eriostemon lanceolatus* just above the ground, feeding upwards and eating out the centre; at intervals of about an inch it gnaws a small hole through the bark, thus leaving a regular row of holes behind, which indicate its whereabouts; as it becomes full grown it crawls downwards, excavating several tunnels in the larger roots, pupating in the last of them. It also feeds on the stems of *Boronia pinnata* in a similar manner. Mr. C. French, of Melbourne, informs me that in Victoria the larva generally feeds upon the stems of the young saplings of *Banksia integrifolia*, but he has bred it also from stems of *Acacia longifolia* (var. *A. sophoræ*), both growing on the coast.

With us the larvæ can be found in the *Eriostemon* bushes from May to December. I have taken them in all stages, as well as the perfect beetle, about June in the vicinity of Sydney. The beetle is not found at large until the early part of November, and is then invariably taken on the *Leptospermum* bushes. It is a very distinct species, the bright shining bare patch in the middle on either side of the elytra, the rest of which, together with the head, thorax, and legs, is densely covered with a creamy pubescence, gives it a very graceful appearance.

It has a wide range over N. S. Wales; I have seen specimens from Sydney, Newcastle, and Wilcannia; it is very variable in size and the pubescence often varies from pale creamy to reddish-brown.

Mr. Best says he has never seen any specimens from inland, and that it feeds on the common wattle (*Acacia decurrens*?).

PACHYDISSUS SERICUS, Newman, Ent. Mag. v. p. 494.

Larva dull white, stout, with broad head and small ferruginous legs; mouth parts and jaws black, head smooth and shining, with ferruginous band at base, the apex flat, finely striated; thoracic

segments narrow, the last two and first six abdominal segments on their upper side ornamented with an irregular oval warty patch, widest and roundest on the apical ones; last segments smooth, anal segment overlapped by preceding one.

The larva has a preference for dead or dying bushes of *Acacia longifolia*, forming large parallel chambers, never of any great length, in the sap-wood of the larger stems.

I have never found the beetle on Acacias, though I have cut a number out of their stems; but I have taken it on the foliage of *Kunzea*, and hiding on the stems of *Banksias* at Rose Bay in January. It is a large handsome dark brown beetle, with the first two joints of the antennæ very stout and thickened, the thorax very much wrinkled, and the elytra and legs covered with a white silvery pubescence.

DISTICHOCERA MACULICOLLIS, Kirby, Trans. Linn. Soc. xii. p. 417, t. 23, f. 10.

Larva stout, thick, white, covered lightly with short hairs; mouth parts and jaws black, latter broad and stout, head broad and square, flat in front, lobed on either side by a line running down towards the mouth, base of head smooth and shining, the upper portion rugose, with a furrow in the centre of forehead; legs small, thoracic and abdominal segments with a deep elongate transverse depression in the centre of each segment, with corresponding ones on the under side; anal segment long, slender, smooth, shining, rounded at tip.

The larva attacks the stems of *Kunzea corifolia*, which it traverses in every direction; commencing under the bark, it gnaws irregular passages backwards and forwards, finally making several large parallel chambers towards the centre of the stem, in one of which it pupates.

The beetle is to be found, together with many others, feeding upon the honey in the flowers of the small scrub *Angophora* (*A. cordifolia*) in the end of December, but I have also taken them on the foliage of the food plant. The sexes are very unlike each other, the male black with white markings on the thorax and

elytra, and large pectinate antennæ ; the female nearly twice the size has simple antennæ, head and thorax black blotched with deep orange-red, the elytra much broader, of a deep orange-red.

SYMPHYLETES NIGROVIRENS, Donovan, Epitom. Ins. N. Holl. 1805.

Larva white to semitransparent ; with broad head and slender segments slightly covered with short hairs ; mouth parts and jaws black, head angular, widest at apex, smooth and shining, with an irregular patch of shallow punctures in centre ; legs wanting ; thoracic and abdominal segments narrow, of uniform thickness, shining on top, all the segments except the first thoracic and the last two abdominal ones with a transverse elongate oval rugose patch in the centre on the upper side, on the under side the first thoracic and the following segments with a double curved patch in their centre.

The larva attacks the upper branches of *Acacia juniperina*, in its earlier stages hollowing out the small twigs, but afterwards feeding down into the main stems, it cuts them clean off under cover of the bark, when they tumble off ; it plugs the hole in the stem below with wood débris, and feeds downwards in a regular straight chamber, at the bottom of which it pupates. It also feeds in a similar manner upon the twigs of *Acacia longifolia*, pupating at the extreme tip of the broken stem.

The beetle is found in December and January feeding upon the bark of the young shoots of *Acacia longifolia*.

This is one of the smallest of the genus, its white face, legs, and broad stripe of white on either edge of the elytron forming a striking contrast to the deep green elytra and heart-shaped buff patch between the shoulders. It is found in N. S. Wales and Queensland. Best says that in Victoria it feeds upon the Black Wattle.

SYMPHYLETES ALBOCINCTUS, Guérin, Voy. Coquille, 1830, p. 137, t. 7, f. 7.

Larva dull white, long and slender, with regular rounded segments ; mouth parts ferruginous, jaws black, large and stout, head broad, smooth and shining, a transverse line near forehead

with a patch of small punctures in centre ; thoracic and abdominal segments of uniform size, deeply divided, rounded, with an elongate-oval depression, rugose on the inner edges in the centre of each, with corresponding markings on the under side, last segment smooth and cylindrical, overlapping the anal tip.

The larva feeds upon the soft woody stems of *Viminaria denudata*, eating the centre out of the small branches, and pupating in the tips. I have also bred it from the small twigs of *Acacia longifolia*.

The beetle feeds upon the young shoots of *Viminaria denudata*, and girdles or ring-barks the branch by gnawing several broad irregular bands round it, laying its eggs, one at a time, in small holes gnawed in the bark above the girdles, and generally depositing three or four in each branch. It is somewhat about the same size as *S. nigrovirens*, with a similar broad white stripe on either side of the elytra, but the back is of a uniform reddish-brown, marbled with irregular wavy buff markings. Found in N. S. Wales and Queensland.

SYMPHYLETES NEGLECTUS, Pascoe, Trans. Ent. Soc. 1863, p. 534.

Larva dirty white, slender, with rounded regular segments ; mouth parts ferruginous, jaws black, head broad, angular, smooth and shining, with a few shallow scattered punctures across the centre, a short parallel line on either side, causing the centre of head to appear square ; second and third thoracic, and all the abdominal segments except the last two, marked on the upper side with a wrinkled elongate-oval patch in the centre, with corresponding but more slender marks on the under side, last abdominal segment almost covering the anal extremity.

The larva feeds upon the stems of *Acacia longifolia*, eating out the wood in irregular tunnels, and pupating in the end of the last one.

The beetle is plentiful in December about Botany and Rose Bay ; it girdles or ring-barks each branch with three or four deep rings right through the bark, then crawls up and gnaws several circular little flaps of bark in a horse-shoe shape without detaching

them, depositing an egg under each ; eggs oval, horn-coloured, and showing a regular network structure under a lens. If the beetle, which also feeds on the decaying bark, can find a dying broken branch, it dispenses with the girdling process and lays its eggs at once.

The beetles are plentiful, but from their uniform grey colour, and their habit of closely clinging to the twigs, they easily escape detection. They are dull brown, but so thickly covered with short grey hairs that it is only old rubbed specimens that show the ground colour ; on either side of the elytra just below the shoulder is a well-defined crescent-shaped mark, by which this species is easily identified.

PIESARTHRIUS MARGINELLUS, Hope, Proc. Zool. Soc. 1840, p. 35.

Larva dirty white, segments long and slender, with short ferruginous legs, and rounded at apex ; mouth parts with an irregular band ferruginous above, jaws black, rounded at forehead, above flattened and shining ; a furrow running down the centre of segments from behind the forehead to anal segment, each segment broadly divided from the preceding by a narrow band formed by the constricted apex of the segment, anal segment rounded at tip, covered with a few scattered hairs.

The larva feeds upon the stems of *Acacia longifolia*, in its earlier stages eating the centre out of the smaller twigs, it comes downward, gnawing all the wood off just under the bark on the top of the main limb, which then falls off ; the larva now gnaws straight down the centre of the stem, filling up the opening at the top with wood débris. Hundreds of branches and young saplings are cut off every year at Rose Bay, the beetle coming out in the middle of December. I have also bred it from a branch of *Acacia decurrens*, received from Mr. J. H. Maiden. Mr. French informs me that it is a common beetle in Victoria on this *Acacia*.

I have never taken it at large, though I have bred a large number from infested twigs. The beautiful feathered antennæ of the male, with the dull reddish-brown longitudinal stripes on the

creamy-white elytra, make this a very showy beetle; the female is much larger, with simple antennæ.

Best gives a long account of this beetle, with a general description of the larva and of its mode of attacking the stems of *Acacia mollissima* in a way somewhat different from that which obtains here. He mentions the rarity of this beetle in the early collections, and states that the reason it is so seldom found is that it climbs up into the topmost branches of the tree as soon as it comes out, and clings so tightly to the twigs that it is impossible to shake it down.

HEBECERUS CROCOGASTER, Boisduval, Voy. Astrolabe, II. p. 492, 18.

Larva semitransparent, brownish, with broad head and slender segments fringed with short hairs on the margins; mouth parts pale yellow, jaws large, ferruginous, black at tips; head large, rounded in front, square behind, smooth and shining on forehead, a parallel furrow from behind the head to the base of the ninth segment; the last two segments smooth, cylindrical, with anal tip small and rounded.

The larva lives upon the dead wood of *Acacia falcata*, eating away the sapwood just below the bark in irregular furrows, only forming a small oval chamber below the bark in the sapwood in which to undergo its transformation. My specimens were bred in November from infested stems collected at St. Mary's, N.S.W., in July.

This little longicorn is a dark chocolate colour, closely covered with fine hairs, the face, legs, and under side clothed with short grey hairs, the basal half or each joint of the antennæ whitish-grey, the apical half covered with much longer close black hairs, the thorax clothed with grey; the elytra deeply and closely punctured, covered with little patches of yellowish-brown hairs, with a lighter coat of scattered longer black hairs. It lives and breeds on the Black Wattle in Victoria, according to Mr. Best.

EUPÆCILA AUSTRALASIÆ, Donovan, Epitom. Ins. N. Holl. 1805.

Larva white, with the anal segments blackish from the earthy matter contained in the intestines showing through, legs stout,



showing the tarsal joints, covered with short reddish hairs; mouth parts ferruginous, jaws black, large, and pointed; antennæ long, five-jointed; head dull yellow, smooth and shining; first thoracic segment small, others uniform with the abdominal ones, on the upper side each is divided into three distinct ridges, each with a transverse row of reddish hairs, last two segments not furrowed, smooth and shining, covered with fine short spines or short hairs as well as the longer scattered ones, last segment rounded.

The larva lives in rotten wood, either the débris in a decaying tree or in similar matter in a cleft. The specimens bred were taken out of a cavity between the limbs of a Eucalypt at St. Mary's, N.S.W., last July; and three months later when examined were all enclosed in hard oval earthen cocoons covered over with dirt and excreta.

This is one of our commonest Cetonias, and is very plentiful in the neighbourhood of Sydney towards the end of December, when numbers of them can be taken on the flowers of the stunted Angophora (*A. cordifolia*). The pale yellowish-green markings on the deep chocolate-coloured body, which is almost black at the head and apical portion of the elytra, give this beetle a very showy appearance.

STIGMODERA RUFIPENNIS, Kirby, Trans. Linn. Soc. xii. p. 456.

Larva slender, pale yellow, with small head and regular segments; mouth parts pale ferruginous, jaws black, very small; head long, triangular in front, raised in the centre, with two parallel ferruginous lines coming from the apex and converging into a point on forehead, on the under side of head a single straight line; thoracic and abdominal segments regular, slender and tapering to the anal one, which is slightly pointed.

The larva feeds upon the stems of *Acacia juniperina*, hollowing out the whole of the wood of the slender stems of this scrubby bush.

The specimens bred were obtained from bushes growing on the ranges near Bendigo, Victoria: it is also a common Sydney

species; I took several last December on the *Angophora* flowers at Mossman's Bay.

This is an easily recognised species, with its steely blue head and thorax, and bright red elytra.

RHINOTIA HÆMOPTERA, Kirby, Trans. Linn. Soc. xii. p. 427, t. 22, f. 7.

Larva dull white, short, rounded, with large head, segments narrow fringed with fine reddish hairs; mouth parts ferruginous, jaws black, small, at the tip of a smooth shining lobe, face above smooth, shining, the upper portion projecting and forming an over-arching ridge, which is finely striated; first and second thoracic segments broadest, abdominal segments of uniform size, divided from each other by a fold at the apex of each preceding one, which forms a triangular patch on either side, anal segment broad, truncate, and shining.

The chief food plant of the larva is *Acacia suaveolens*, but I have also bred it out of *A. pubescens* and *A. discolor*. The eggs are laid on the under side of the limb, where a small patch of bark has been gnawed off by the beetle, a minute hole showing where the larva has entered; as it grows it hollows out the whole of the stem, pupating in the upper end. At Rose Bay in May nearly every bush of this *Acacia* contained one or more of the beetles or their larvæ.

The beetle is a common one about Sydney, feeding chiefly on the foliage of *Acacia discolor*, early in November. Its black head and thorax, with deep brick-red elytra divided down the centre with a narrow black stripe, and its elongated body easily distinguish it from any other of the weevils.

CHRYSOLOPHUS SPECTABILIS, Donovan, Epitom. Ins. N. Holl. 1805.

Larva white, with shining ferruginous head, stout black jaws, and rounded obese much wrinkled body; above the head slightly tinged with a ferruginous band; thoracic and abdominal segments very much corrugated with many fine transverse furrows, so that seen from above the divisions of the segments are very indistinct.

broadest about the middle, rounded at anus, a faint parallel furrow down the centre of the back; a few scattered hairs on sides.

The larva attacks the stems of *Acacia discolor*. The beetle lays the eggs singly on the stem after gnawing up a bit of bark, under which the egg is placed; sometimes a score of these roughened patches may be counted on a single tree all close together. The larva feeds downwards, forming large cylindrical chambers into the roots, which it completely hollows out, packing the gnawed wood so close behind it that it is difficult to detect it. I have also bred it from the roots of *Acacia suaveolens*, *A. linearis*, and *A. laurifolia*.

This was originally described as the "Botany Bay Diamond Beetle," and though one of our commonest Sydney beetles it is also one of the most beautiful; its large size and brilliant black head and body thickly covered with patches of bright green scales make it one of the most striking objects among our insects. It is found on nearly a dozen different species of Acacias, among them *A. discolor*, *A. longifolia*, *A. dealbata*, *A. decurrens*, and *A. suaveolens*.

PAROPSIS VARIOLOSA, Marsham, Trans. Linn. Soc. ix. 1808, p. 285, t. 24, f. 1.

Larva yellow and black, stout, short, with well-developed legs terminating with a claw; mouth parts, jaws, and head black, head and first thoracic segment furrowed in centre; legs black; first thoracic segment black, with orange-yellow markings at apex, second and third with first abdominal segments orange-yellow in centre, clouded on the sides with black, with a transverse band of black warty rounded excrescences in the middle of each, separated by large blotches of yellow; the last two and anal segment black, with yellow patch on either side.

The larva is a very active creature, crawling about on the leaves of *Eucalyptus corymbosa* upon which it feeds, attacking the leaf from the outer edge and eating it up to the midrib. The larvæ feed singly and do not cluster together like those of other

species ; when full grown they fall to the ground, burying themselves in the earth or rubbish, sometimes several inches beneath the surface, at others having the last few segments of the abdomen above the ground ; these stand out and are jerked about rapidly if anything touches them ; in a week or ten days the pupa turns into the perfect beetle and ascends the tree again.

This is one of the large leaf Paropses ; the thorax and elytra are shining, reddish-brown, with irregular spots of pale yellow scattered all over, and very deeply punctured.

PAROPSIS RETICULATA, Marsham, Trans. Linn. Soc. ix. p. 285, t. 24, f. 2.

Larva short, stout, pale yellow, with black markings on upper side, legs long, robust ; head and first thoracic segment black, the latter with narrow yellow margin on sides, second and third thoracic segments and legs yellow, the first six abdominal ones yellow with broad stripe of black on the sides, seventh and eighth yellow with rounded black patch in centre, anal segment black ; a broad parallel clouded black band containing four small black tubercles on each segment traverses the centre of the back ; under side pale yellow.

The larvæ feed upon the leaves of several species of Eucalypts, gnawing them in a similar manner to the previous species, but they cluster together much more when feeding ; they undergo their metamorphoses in the ground. The eggs are laid in a ring consisting of several rows round a slender twig ; they are long, oval, enclosed in an outer brownish-yellow ribbed shell, surmounted at each corner with a little curved horn.

This beetle is the commonest *Paropsis* about Sydney ; the thorax is pale yellow with a marbled pattern, the elytra palish yellow, turning to reddish when dead, very finely and closely reticulated.

CALOMELA BARTONI, Baly, Trans. Ent. Soc. Lond. 1856, p. 245.

Larva with the head, thorax, and legs black, with pale green abdomen ; mouth parts and jaws black ; legs stout ; thorax narrow ; the abdomen larger, rounded, almost globular.

The larva feeds upon the foliage of *Acacia decurrens*, and is often very plentiful, but difficult to see on account of its protective colouration. The specimens bred were obtained in the Maitland district, but the insect has a very wide range over N. S. Wales and Victoria.

The beetle is always found on this *Acacia*; the head, thorax, and elytra are dark orange-yellow, deeply punctured; a broad parallel stripe of rich metallic green on either side. All the members of this genus, as far as I know, are found on this or other closely allied species of *Acacia*.

EPISCAPHULA PICTIPENNIS, Crotch, Cist. Ent. xiii. 1876, Revis.
p. 35.

Larva pale yellow with black markings on the upper portion of segments, legs long, terminating in a sharp tarsal claw; mouth parts ferruginous, jaws small, head dull yellow, smooth, shining, with four or five black dots above the antennæ, rounded in front, square at apex; thoracic and abdominal segments dull yellow, the centre of each covered with a transverse elongate square blackish-brown patch covering nearly the whole of segment, a parallel dull yellow band interrupting them down the centre, broadest and lightest behind the head, blending with the brown towards the apex, anal segment surmounted by two small black spines; all the under side pale yellow. Pupa pale yellow with black eyes, and the portion of back black in larva replaced with patches of small black spines.

The larva feeds upon a small soft fungus growing on fences, in which it also undergoes its transformations; it is common in the neighbourhood of Sydney.

The beetle has the antennæ and head black, with a broad reddish-yellow bar between the eyes; thorax reddish-brown, darkest on the margins, with an irregular dark brown oval patch on either side; elytra deep brown with fine parallel striæ carrying fine punctures, an irregular star-shaped creamy-white patch on either shoulder; a crescent-shaped patch, creamy-white, about two-thirds down, and forming two large oval patches at the apex

of thorax, containing a bright reddish oval spot in centre of each ; under side of thorax and last two segments of abdomen reddish-yellow, the rest and the legs testaceous.

One of the commonest of the large fungus beetles found about Sydney.

AULACOCYCLUS KAUPI, Macleay, Trans. Ent. Soc. N.S.W. Vol. ii. p. 173.

Larva white, long, slender, with small brown head and very long slender legs terminating in a long slender sickle-shaped tarsal claw; mouth parts ferruginous; antennæ stout, two-jointed; jaws small, black; head broadest between the antennæ, narrow behind, impressed on either side with a triangular dint, and a slight furrow in centre; first thoracic segment broad, rounded in front, with deep dint on either side joined by a transverse furrow in centre, the following segments broad, with a narrow rounded fold in front, the hind portion raised slightly, swelling out, a faint parallel furrow down the centre, anal segment ending in a round fold, anus in centre forming a triangular opening; under side regular, crenulated, and all the segments covered with scattered long hairs.

The larvæ are found under large rotten logs, upon which they feed, crawling about with their bodies arched slightly; they form large cylindrical oval smooth brown cocoons of earthy fragments, and can be found together in all stages in January.

This Passalid is a common species of medium size, black, smooth and shining, the thorax ornamented with a small curved horn, blunt and cleft in the centre, the elytra broadly and deeply furrowed with fine punctures in the striæ.

LAGRIA GRANDIS, Gyll. Schonh, Syn. Ins. 1, 3, App. p. 9.

Larva black, shining, covered with short reddish hairs; head small, antennæ short, jointed, standing out straight on either side, ferruginous; legs stout, with tarsal claw; segments regular, rounded, smooth and shining, rounded towards the tip of abdomen, where the last segment is produced into two conical pointed spines.

The larva lives under damp logs, moving about very quickly when disturbed, and casting its skin very frequently ; after moulting it is quite white, but soon regains its natural colour.

The beetle is found on the foliage of young Eucalypts ; it is the common *Lagria* about Sydney ; it is light reddish-brown, very closely covered with fine confluent punctures and a scattered growth of short brown hairs.